person faces the display board portion **3**). The top surface **2***a* of the case body **2** has an opening **2***g* which accepts the display board portion **3**.

[**0034**] The display board portion **3** (**FIG. 3**) is comprised of a surface board portion **9** which has a rectangular shape, tactile pins **10** which can project beyond or retract from the top surface of the surface board portion **9**, and the like. The display board portion **3** is attached to and supported by the case body **2** via support brackets **14** in a condition where the top surface of the display board portion **3** protrudes upwardly beyond the top surface **2***a* of the case body **2**. In this structure, the support brackets **14** comprise stepped portions **14***a* (**FIG. 6**) projecting inward beyond the opening **2***g* of the top surface **2***a* of the case body, so that the display board portion **3** can be mounted to the case body **2** as screws **14***b* are inserted into the stepped portions **14***a* from above the display board portion **3** in a condition where the display board portion **3** is on the top surface of the stepped portions **14***a*. The display board portion **3** is thus structured such that the display board portion **3** alone can be freely attached and detached from outside the case body **2**.

[**0035**] An upper plate **11** and a lower plate **12** and a friction member **13**, which is like a thin film sheet firmly held in an airtight manner between the upper and the lower plates **11**, **12**, are in a laminated manner and assembled into one, whereby the surface board portion **9** forming the display board portion **3** is obtained. A number of through holes **15** are formed in a matrix arrangement in the surface board portion **9**, penetrating through the upper plate **11**, the friction member **13**, and the lower plate **12** in the vertical direction.

[**0036**] There are 48 such through holes in the vertical direction and 64 such through holes in the horizontal direction, i.e., 48 rows and 64 columns for a total of 3072 such through holes **15** in this exemplary embodiment. Each through hole **15** accepts a tactile pin **10** in such a manner that the tactile pin **10** can move upward or downward as controlled. The tactile pin **10** (**FIG. 5**) is formed by a main pin part **10***a* whose top end portion is cone-shaped, a tactile dot part **10***b* which is fixedly engaged with the top end of the main pin part **10***a*, and is cylindrical and slightly larger in diameter than the main pin part **10***a*, and a disk-like abutting part **10***c* whose bottom surface is arc-shaped and which is attached to the bottom end of the main pin part **10***a*. When actuation pins **16**, which will be described later, push the abutting parts **10***c* from below, the tactile pins **10** rise up to upper movable positions at which the top end portions of the tactile dot parts **10***b* project upwardly beyond the top surface of the surface board portion **9**. Conversely, the tactile pins **10** at the upper movable positions, when pushed down by a roller **17** (**FIG. 1**) which will be described later, move downwardly to lower movable positions at which the top end portions of the tactile dot parts **10***b* become approximately flush with the top surface of the surface board portion **9**. In this manner, the tactile pins **10** at the upper movable positions and the lower movable positions form differences in elevation, which provides the image information on the display board portion **3**.

[**0037**] The inner diameters of the through holes **15** are set such that the through hole portions formed in the upper plate **11** correspond to the diameters of the tactile dot parts **10***b* of the tactile pins **10**, and the through hole portions formed in the friction member **13** and the lower plate **12** correspond to the diameters of the main pin parts **10***a* of the tactile pins **10**. The tactile pins **10** at the lower movable positions are blocked from moving further down when the bottom ends of the tactile dot parts **10***b* contact the top surface of the friction member **13**, and from moving further upwardly when the top surfaces of the abutting parts **10***c* contact the bottom surface of the lower plate **12**.

[**0038**] The friction member **13** is formed by a thin film sheet member, such as leather, rubber or cloth, and corresponds to the pin holding member of the invention. In this exemplary embodiment, the friction member **13** is formed by cloth, such as denim which has friction force. Firmly held in an airtight manner between the upper and the lower plates **10**, **11**, the friction member **13** is held in a state of tension. The tactile pins **10** at the upper movable positions and the lower movable positions are securely and instantly held at these positions by the friction force of the friction member **13**. The friction force of the friction member **13** applies a minimal and stable resistance to the tactile pins **10** but does not prevent the tactile pins **10** from moving upward or downward.

[**0039**] Further, the tactile dot parts **10***b* are formed using spring pins (cylindrical pins having split grooves along the axial direction which are elastic along the radius direction). Owing to the spring force of the spring pins, the tactile dot parts **10***b* are engaged easily with the main pin parts **10***a* without fail, to have securing strength against vibrations. While the top end portions of the tactile dot parts **10***b* are to be touched at the fingertips, the top end shoulder portions of the spring pins are square, i.e., the top and cylindrical side wall are at right angles to one another as seen from the side in **FIG. 5**. This provides an advantage where a feeling for recognizing and identifying the boundaries between projecting sections is smooth and it is therefore easy to recognize the image information.

[**0040**] The roller **17** is for applying external force which moves the tactile pins **10** at the upper movable positions down to the lower movable positions against the friction force of the friction member **13**. The roller is supported by the case body **2** such that the roller **17** can rotate on the surface board portion **9** during movement. Hence, as the roller **17** rotates to push down the tactile pins **10** which are at the upper movable position, the tactile pins **10** move down to the lower movable position.

[**0041**] The movable unit **5** is housed within the case body **2** together with the horizontal movement mechanism **6**, the vertical movement mechanism **7** and the control part **8**. The movable unit **5** comprises eight solenoids **4**, the actuation pins **16** which move upward and downward as the solenoids **4** turn on and off, a support frame **18** (**FIG. 4**) to which the solenoids **4** and the actuation pins **16** are attached, and the like. Although the movable unit **5** is capable of moving in the horizontal direction and the vertical direction below the display board portion **3** described above, the details of the horizontal and the vertical movement mechanisms **6**, **7** will be given later. Actuation of the actuation pins **16** in accordance with turning on and off of the solenoids **4**, the arrangement of the solenoids **4** and movements of the movable unit **5** in the horizontal direction and the vertical direction will now be described.

[**0042**] The support frame **18** is obtained by assembling a top side **18***b*, a middle side **18***c*, and a bottom side **18***d* to a